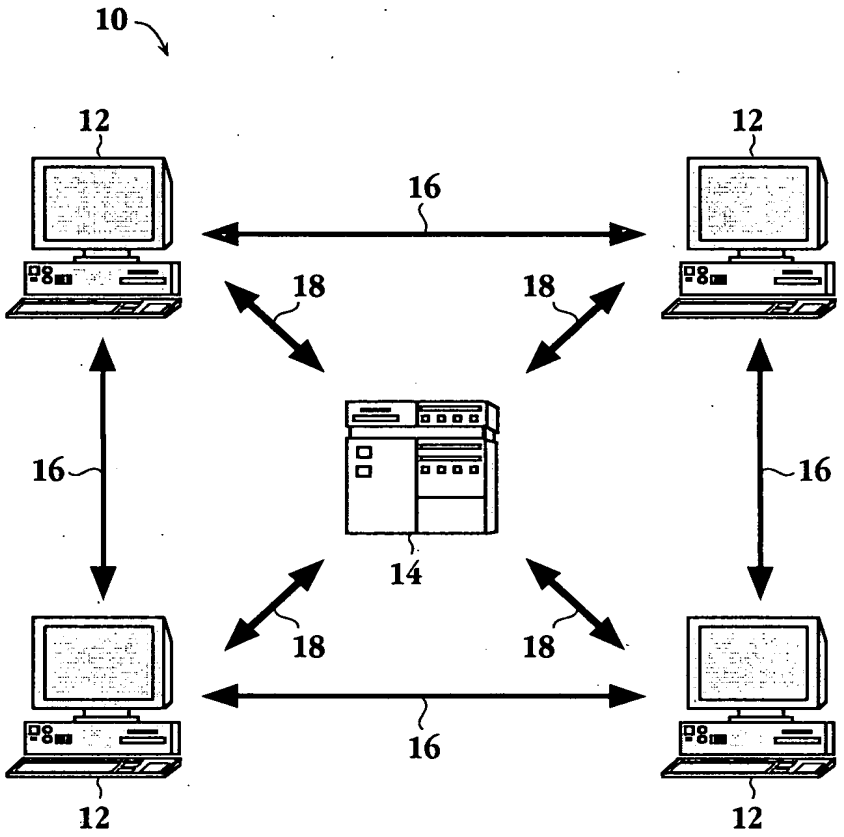

Fig. 1

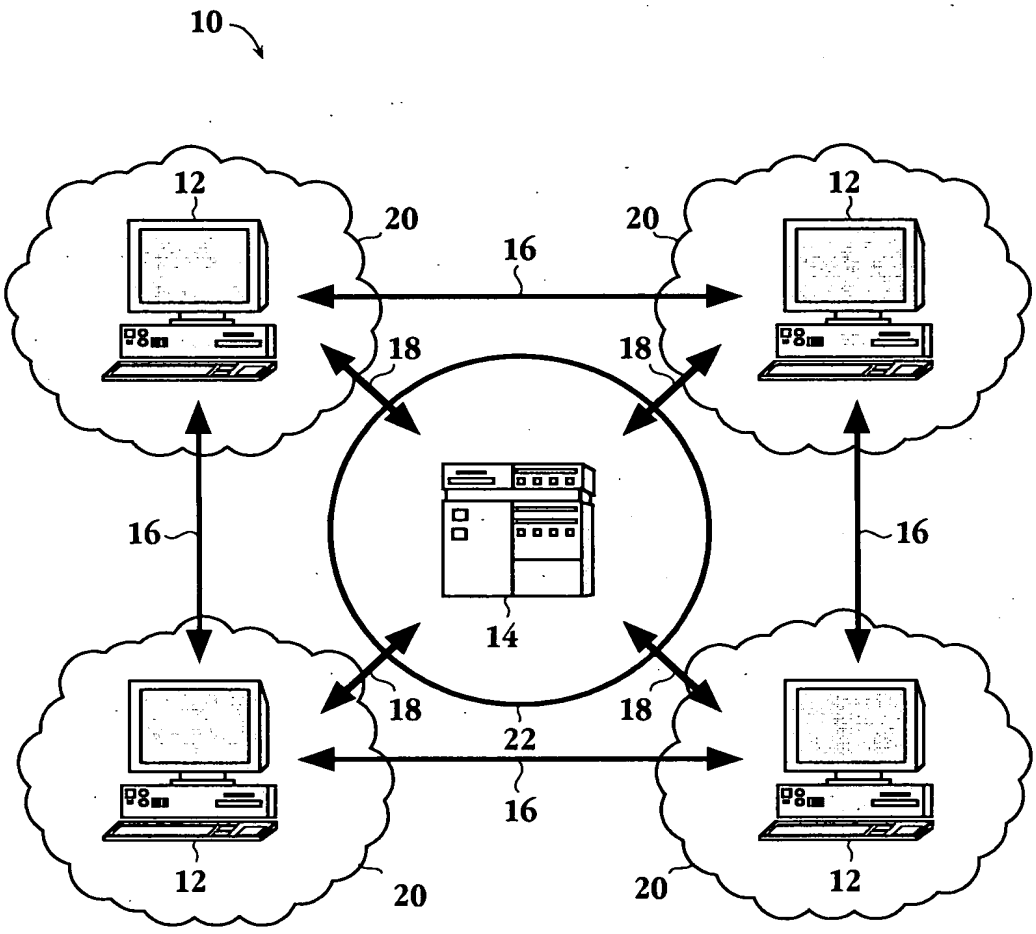

Fig. 2

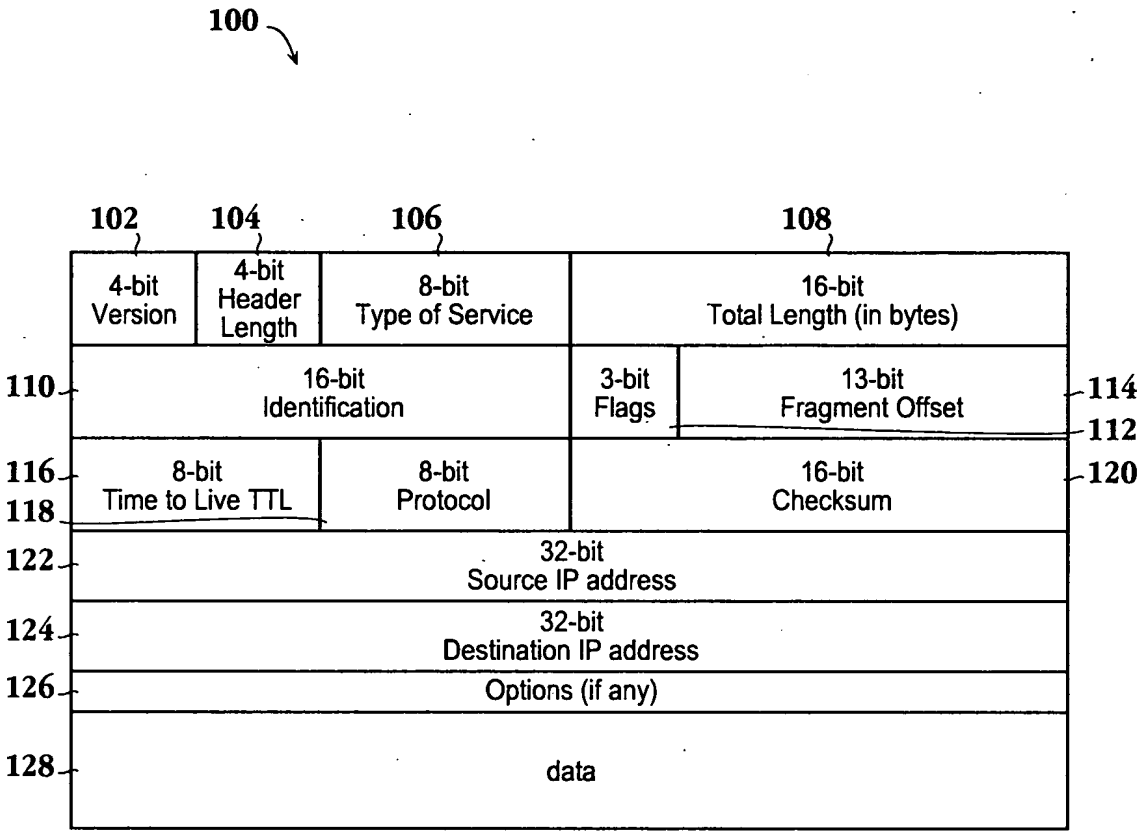
100
102
104
106
108
4-bit Version
4-bit Header Length
8-bit Type of Service
16-bit Total Length (in bytes)
110
16-bit Identification
3-bit Flags
13-bit Fragment Offset
114
112
116
8-bit Time to Live TTL
118
8-bit Protocol
16-bit Checksum
120
122
32-bit Source IP address
124
32-bit Destination IP address
126
Options (if any)
128
data

Fig. 3

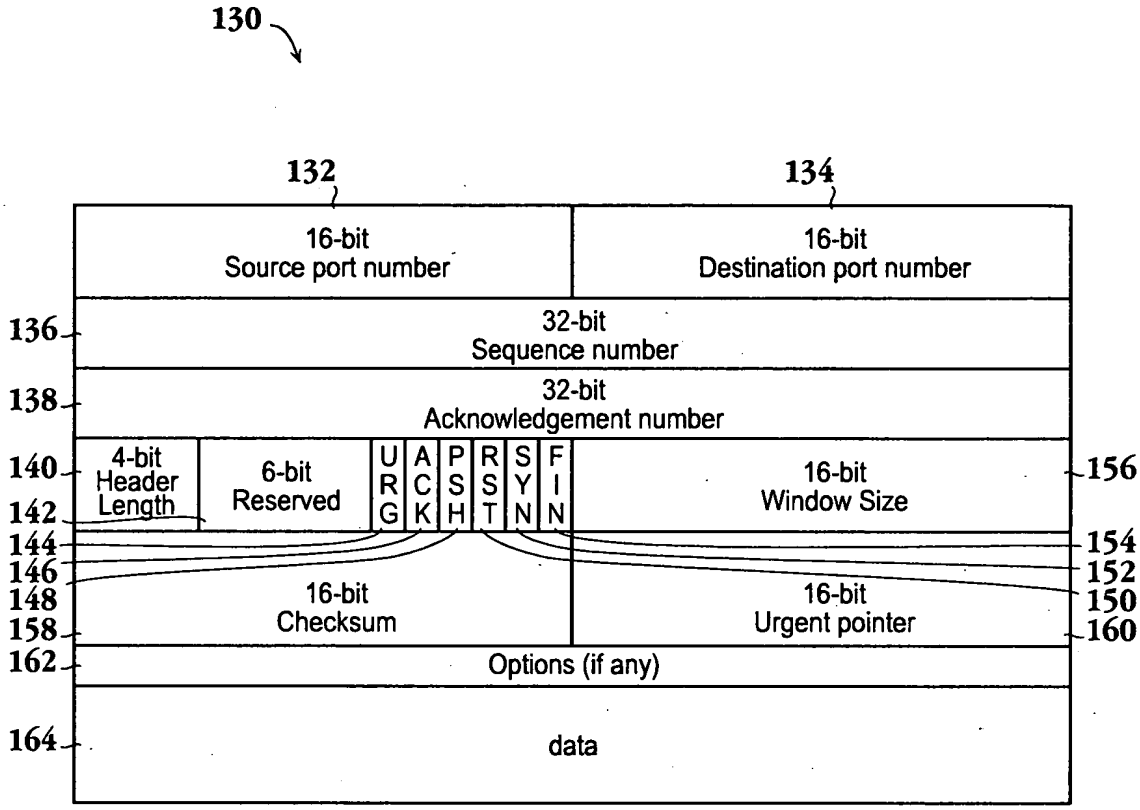
130
132
134
16-bit
Source port number
16-bit
Destination port number
136
32-bit
Sequence number
138
32-bit
Acknowledgement number
140
4-bit
Header
Length
142
6-bit
Reserved
U
R
G
A
C
K
P
S
H
R
S
T
S
Y
N
F
I
N
16-bit
Window Size
156
144
154
146
152
148
150
16-bit
Checksum
158
16-bit
Urgent pointer
160
162
Options (if any)
164
data

Fig. 4

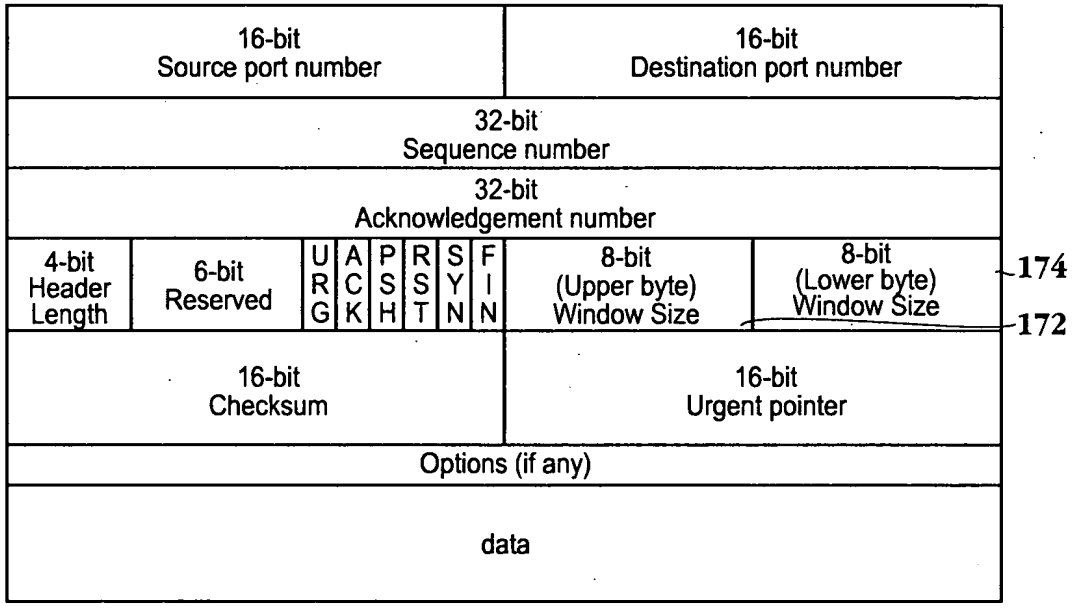
170
16-bit
Source port number
16-bit
Destination port number
32-bit
Sequence number
32-bit
Acknowledgement number
4-bit
Header
Length
6-bit
Reserved
U
R
G
A
C
K
P
S
H
R
S
T
S
Y
N
F
I
N
8-bit
(Upper byte)
Window Size
8-bit
(Lower byte)
Window Size
174
172
16-bit
Checksum
16-bit
Urgent pointer
Options (if any)
data

Fig. 5

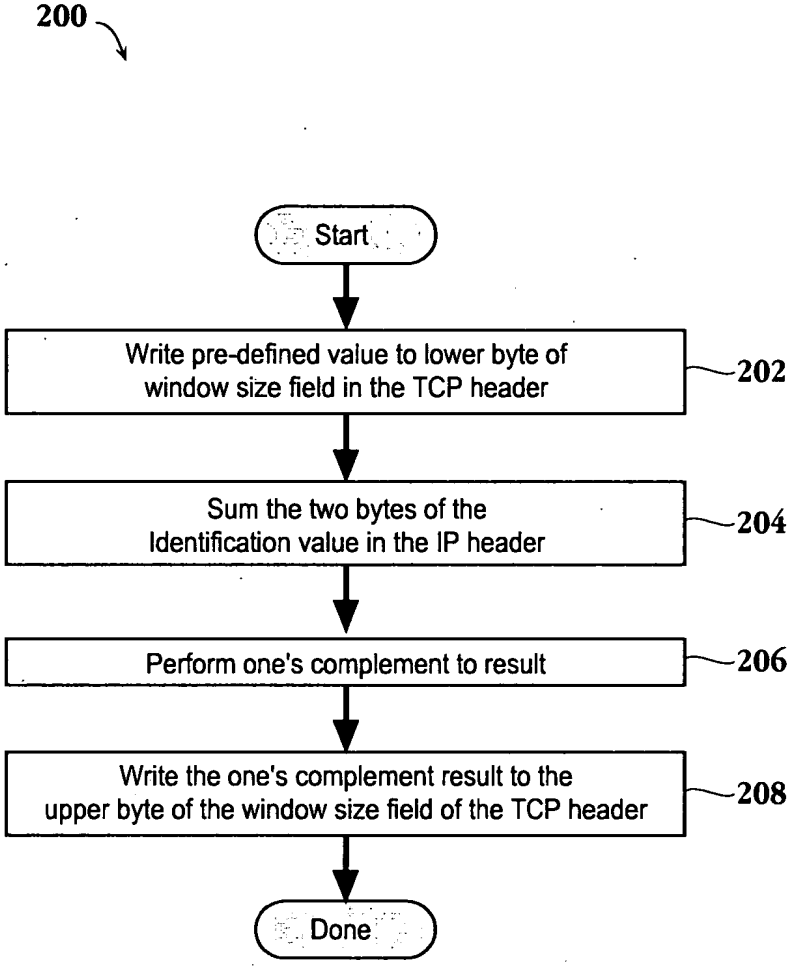
200
Start
Write pre-defined value to lower byte of window size field in the TCP header
202
Sum the two bytes of the Identification value in the IP header
204
Perform one's complement to result
206
Write the one's complement result to the upper byte of the window size field of the TCP header
208
Done

Fig. 6

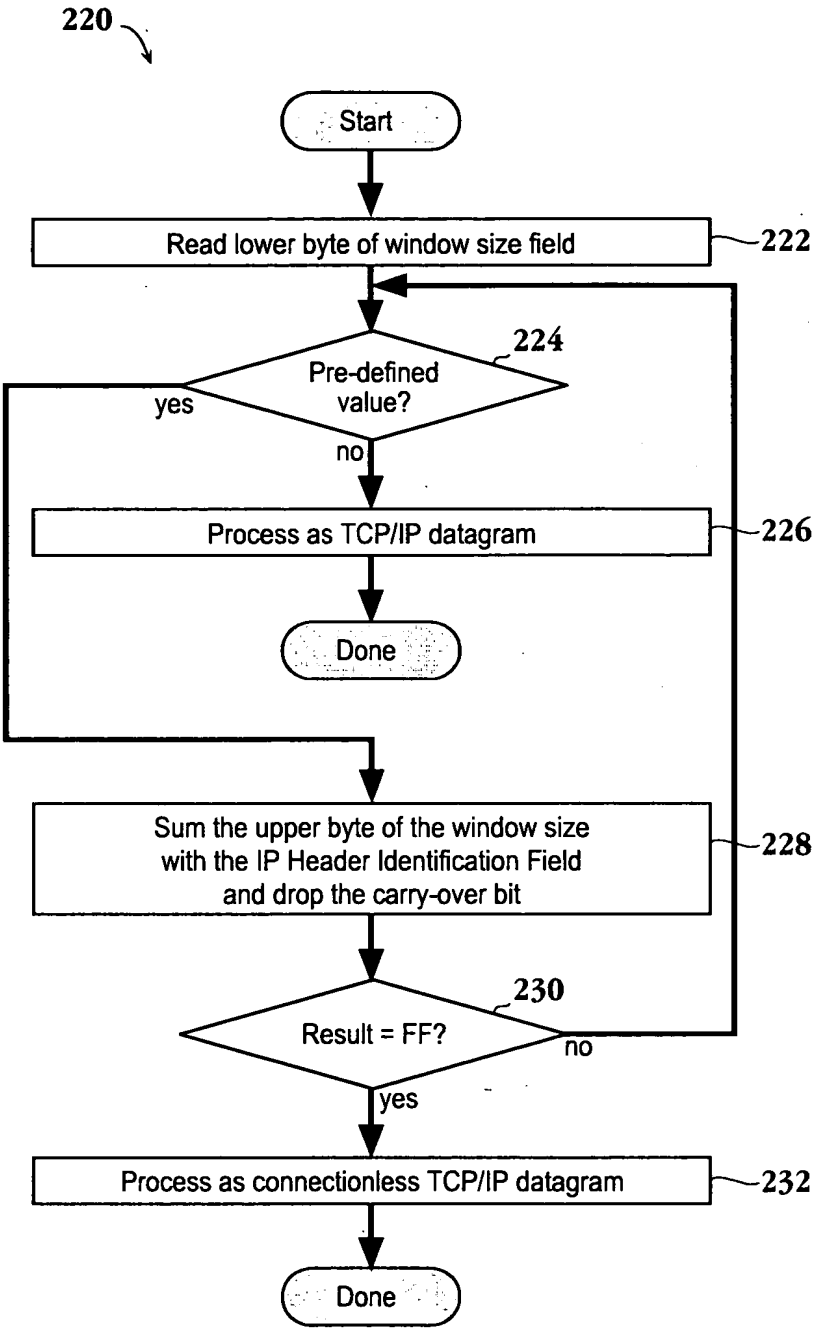
220
Start
Read lower byte of window size field
222
224
Pre-defined value?
yes
no
Process as TCP/IP datagram
226
Done
Sum the upper byte of the window size with the IP Header Identification Field and drop the carry-over bit
228
230
Result = FF?
no
yes
Process as connectionless TCP/IP datagram
232
Done

Fig. 7

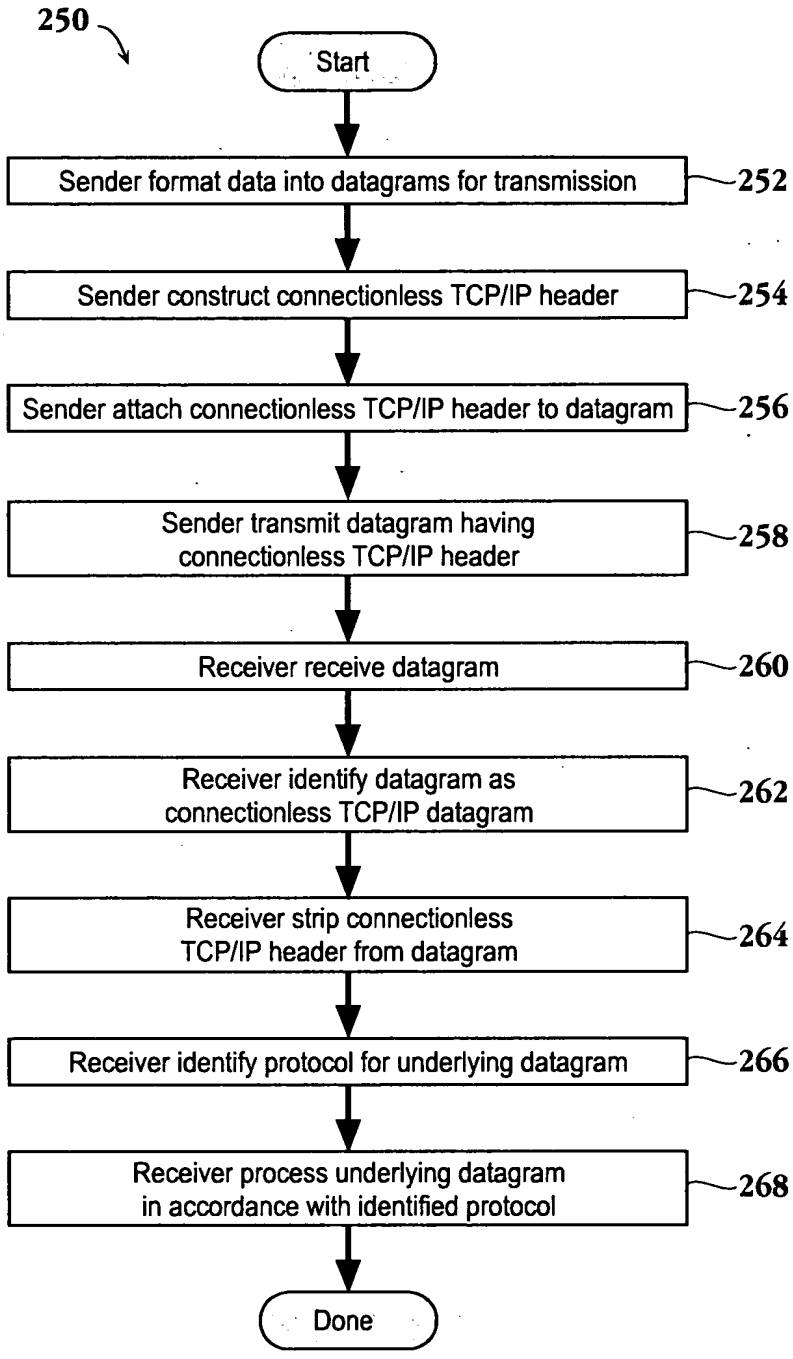
250
Start
Sender format data into datagrams for transmission
252
Sender construct connectionless TCP/IP header
254
Sender attach connectionless TCP/IP header to datagram
256
Sender transmit datagram having connectionless TCP/IP header
258
Receiver receive datagram
260
Receiver identify datagram as connectionless TCP/IP datagram
262
Receiver strip connectionless TCP/IP header from datagram
264
Receiver identify protocol for underlying datagram
266
Receiver process underlying datagram in accordance with identified protocol
268
Done

Fig. 8